

# Federal Fleet Compliance with EPOAct and E.O. 13149

## Fiscal Year 2004

This report summarizes the Federal Government's fiscal year (FY) 2004 performance in meeting the vehicle fleet requirements of the Energy Policy Act (EPOAct) of 1992 (Public Law 102-486), as amended by the Energy Conservation Reauthorization Act of 1998 (Public Law 105-388), and the goals and requirements of Executive Order (E.O.) 13149, "Greening the Government through Federal Fleet and Transportation Efficiency" (65 FR 24607), which was signed in April 2000 (Exhibit 1).

**Exhibit 1. Federal Fleet Performance with EPOAct and E.O. 13149, FY 2004**

Authority/ Mandate	Performance Measure	Goal/Requirement	Federal Fleet Performance in FY 2004 <sup>1</sup>
EPOAct	Alternative fuel vehicle (AFV) acquisitions	75 percent of the 18,426 covered light-duty vehicles (LDV) acquired in FY 2004 must be AFVs	Acquired 14,811 AFVs, earned 2,864 additional credits <sup>2</sup> for total of 17,675 credits or 96 percent of covered acquisitions
E.O. 13149	Alternative fuel use in AFVs	By FY 2005, increase alternative fuel use in AFVs to a majority of the total fuel used in those vehicles	Two of the 19 covered agencies used alternative fuel in AFVs for a majority of the fuel used in those vehicles
	Fuel economy of light-duty acquisitions	By FY 2005, increase fuel economy by 3 miles per gallon (mpg) compared to FY 1999 baseline	Five of the 19 covered agencies increased their fuel economy by at least 3 mpg, in comparison to FY 1999
	Petroleum consumption	By FY 2005, reduce covered petroleum consumption by 20 percent compared to FY 1999 baseline <sup>3</sup> of 279,601,577 gasoline gallon equivalents (GGE)	Consumed 277,911,017 GGE of petroleum, a decrease of 0.6 percent from the baseline

<sup>1</sup>Individual agency performance detailed in Appendices A and B.

<sup>2</sup>Additional credits earned for the acquisition of dedicated light-, medium-, and heavy-duty AFVs and the use of biodiesel.

<sup>3</sup>Baseline changed in FY 2004.

## EPAct Compliance

For the second consecutive year, the overall Federal fleet exceeded its EPAct AFV acquisition requirement in FY 2004—with 14 of the 19 agencies meeting the requirement (Appendix A). As a result of AFV acquisitions and biodiesel fuel use, covered Federal agencies achieved a record compliance rate—21 percentage points higher than the 75 percent AFV acquisition requirement. In FY 2004, covered Federal agencies:

- Acquired 18,426 EPAct-covered LDVs. Of these, 14,811 were AFVs—991 more vehicles than the 75 percent compliance requirement of 13,820 AFVs.
- Received an additional 2,864 credits through the acquisition of dedicated AFVs and the use of biodiesel.
- Earned a total of 17,675 credits (including vehicle acquisitions and credits)—96 percent of covered acquisitions.

### Credits

Federal fleets earn one credit for every bi- or flexible-fuel AFV acquired. Additional credits are earned for every 450 gallons of neat biodiesel (B100) or 2,250 gallons of B20 (20 percent biodiesel and 80 percent petroleum diesel) used. Additional credits are also earned for AFVs that operate exclusively on alternative fuels.

In FY 2004, covered Federal agencies earned 14,811 credits for AFV acquisitions, 2,592 credits for biodiesel use, and 272 additional credits for acquiring dedicated light-, medium-, and heavy-duty AFVs, for a total of 17,675 credits. As such, Federal AFV acquisitions alone accounted for 80 percent of all covered acquisitions—five percentage points beyond the EPAct requirement (Exhibit 2).

### Vehicles

Flexible-fuel vehicles (FFV) that can run on E85 (85 percent ethanol, 15 percent gasoline) or gasoline were the AFV of choice in FY 2004. Of the 14,811 AFVs acquired in FY 2004, 13,892 (94 percent) were FFVs. Also, 805 compressed natural gas (CNG) vehicles, 88 electric, and 26 propane (also called LPG, liquefied petroleum gas) vehicles were acquired.

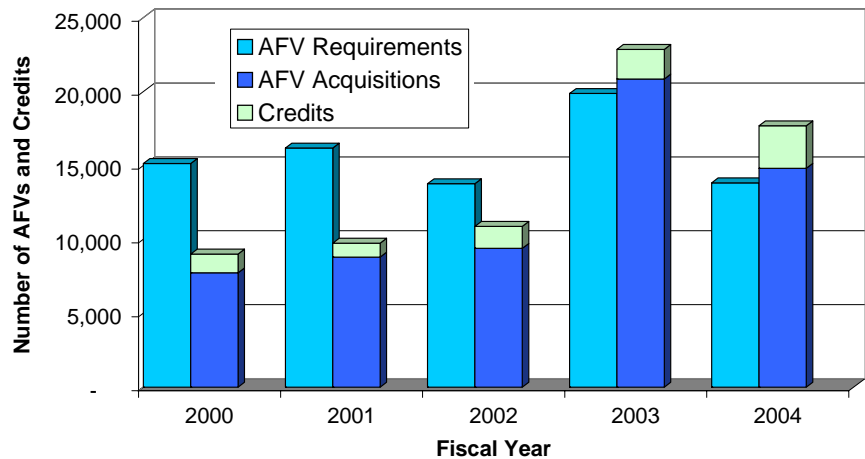
FFVs operating on E85 comprise the majority (83 percent) of the AFVs in the overall Federal fleet (Exhibit 3), with CNG vehicles making up most of the balance (16 percent). As the availability of gaseous fuel (CNG and LPG) vehicle models decreases, these vehicle types will become less prevalent in the Federal fleet. Liquefied natural gas (LNG), electric (ELE), and LPG vehicles combined account for less than one percent of the 85,119 AFVs in the 19 EPAct-covered agencies.

### Exemptions

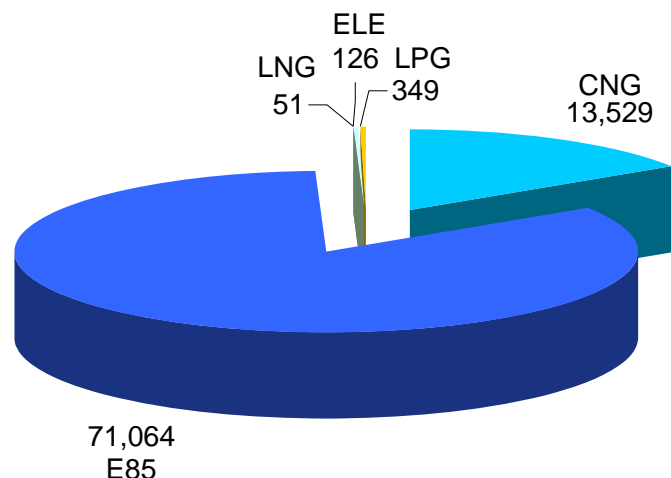
Of the 46,209 total LDVs acquired by covered Federal agencies in FY 2004, 27,783 vehicles (60 percent) were considered exempt from compliance with EPAct. Exemptions are granted for fleet size, geographic location or use outside a Metropolitan Statistical Area/Consolidated Metropolitan Statistical Area (MSA/CMSA), and use for law enforcement. In FY 2004, exemptions were granted as follows:

- Fleet Size (2,866)
- Geographic (1,551)
- Law Enforcement (9,682)
- Non-MSA/CMSA Operation/Fleet (4,627)
- Non-MSA/CMSA Operation/Vehicles (9,057)

**Exhibit 2. EPAct AFV Acquisitions, Credits and Requirements**



**Exhibit 3. Total AFV Inventory of Federal Agencies Covered by EPAct**



## E.O. 13149 Compliance

E.O. 13149 calls for each agency to reduce vehicular petroleum consumption by 20 percent by the end of FY 2005, in comparison with a base year of FY 1999, and specifies three approaches agencies should take to achieve this goal:

- Comply with EPA's annual AFV acquisition requirements (as previously discussed).
- Use alternative fuels in AFVs for a majority of the fuel used in those vehicles.
- Increase the fuel economy of light-duty acquisitions (excluding AFVs) by 3 mpg by the end of FY 2005, as compared to FY 1999 baseline acquisitions.

The following sections discuss the overall level of compliance throughout the Federal fleet. Individual agency information is outlined in Appendix B.

### Use Alternative Fuels in AFVs

In FY 2004, two of the 19 covered agencies used alternative fuels in their AFVs more than 50 percent of the fuel used in those vehicles. One reason for the relatively low alternative fuel use rate is the lack of sufficient alternative fuel infrastructure. To remedy this, several agencies have invested in new alternative fuel stations at locations throughout the United States. Exhibit 4 shows the number and types (by State) of known Federal alternative fueling sites available in FY 2004 and projected to go online in 2005.

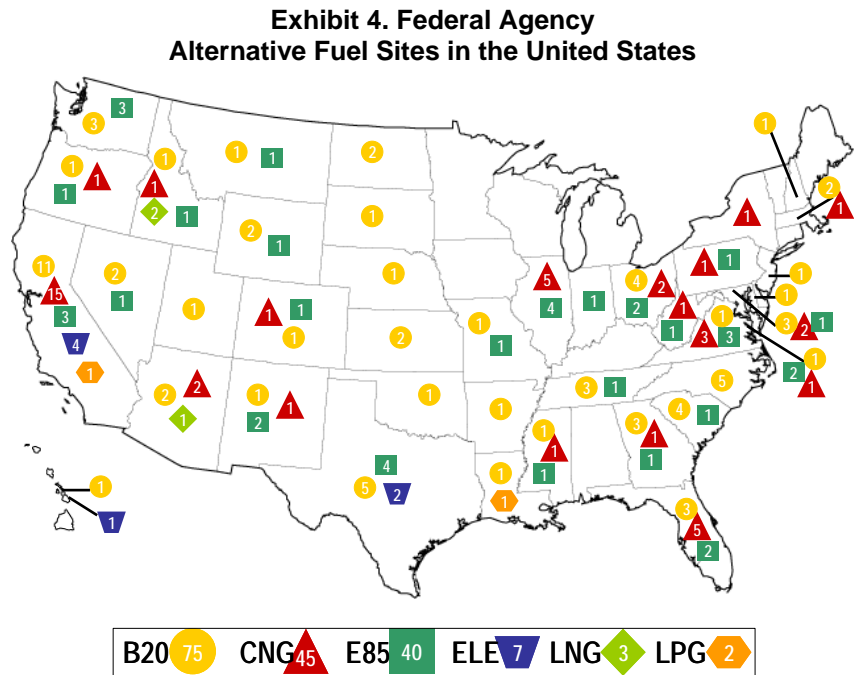


Exhibit 5 compares fuel use by covered Federal agencies in FY 2004 and FY 2003. Alternative fuels comprise a growing portion of agencies' covered fuel use, representing 1.57 percent in FY 2004, up from 1.06 percent the year before. During this period, the total covered fuel use of Federal agencies decreased 2.4 percent, and Federal agencies were able to reduce covered petroleum consumption by 2.9 percent largely by replacing petroleum fuel with alternative fuels.

### Improve Fuel Economy

Toward the 20 percent petroleum reduction goal, E.O. 13149 calls for each agency to increase the fuel economy of its LDV acquisitions (excluding AFVs). In FY 2004, five agencies increased the average fuel economy of these vehicles by at least 3 mpg, in comparison to FY 1999.

**Exhibit 5. Total Fuel Use of  
Federal Agencies Covered by E.O. 13149**

Fuel Use	FY 2003 (GGE)	FY 2004 (GGE)	Change (%)
<b>Alternative Fuel</b>			
Biodiesel (B100)*	765,841	1,305,194	70.4
CNG	574,467	1,156,211	101.3
E85	1,587,035	1,771,236	11.6
Electricity	18,866	3,369	-82.1
LNG	22,843	90,940	298.1
LPG	104,085	107,847	3.6
M85	2,681	-	-100.0
Total Alternative Fuel Use	3,075,818	4,434,797	44.2
<b>Petroleum</b>			
Total Covered Petroleum Use	286,288,185	277,911,017	-2.9
Total Covered Fuel Use	289,364,003	282,345,814	-2.4
Alternative Fuel Use as a Percentage of Total Fuel Use	1.06	1.57	47.8

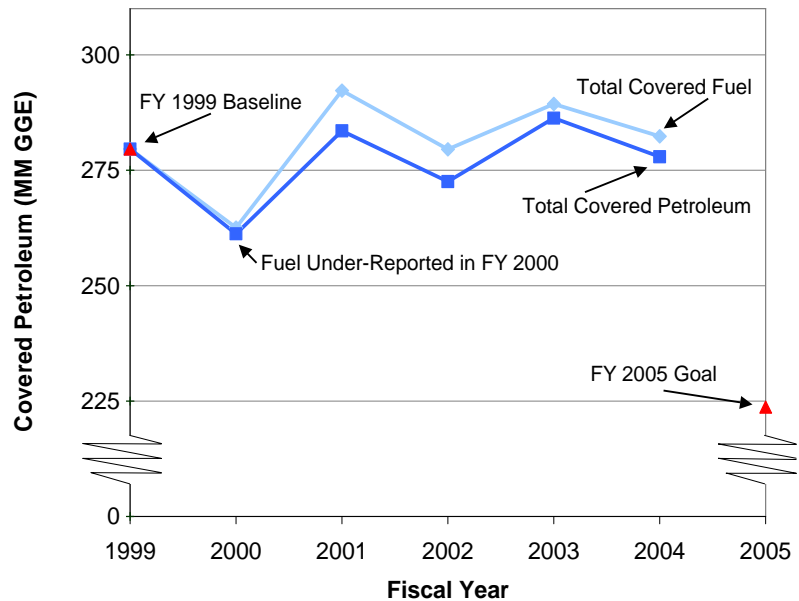
### Petroleum Consumption Progress Report

In FY 2004, covered Federal agencies consumed 4,434,797 GGE (Appendices B and C) of alternative fuels, thereby reducing gasoline and diesel fuel consumption in Federal vehicles. These agencies reported 277,911,017 GGE covered petroleum consumed in FY 2004, down from 279,601,577 GGE reported in FY 1999—a reduction of 0.6 percent. Although covered Federal agencies have not approached the 20 percent reduction goal set forth in E.O. 13149, they have been successful in displacing petroleum, as illustrated in Exhibit 6.

Without E.O. 13149, the transportation petroleum consumption of covered Federal agencies would have grown to 282 million GGE in FY 2004. However, due to alternative fuel use, covered petroleum consumption in FY 2004 was slightly less than consumed in FY 1999.

As evident in Exhibit 6, the petroleum consumption data reported by covered Federal agencies is inconsistent. The U.S. Department of Energy (DOE) is working with agencies to improve the quality of their data.

**Exhibit 6. Vehicular Petroleum Consumption of Federal Agencies Covered by E.O. 13149**



### Summary and Conclusions

In FY 2004, the overall Federal fleet exceeded its EPA's FY 2004 AFV acquisition requirements. Covered agencies acquired 14,811 AFVs and earned 2,864 credits for a total of 17,675 credits—96 percent of covered acquisitions.

Toward compliance with E.O. 13149, covered Federal agencies consumed more than 4.4 million GGE of alternative fuels. Five of the 19 Federal agencies increased the fleet fuel economies of their LDV acquisitions by at least 3 mpg, and two agencies used alternative fuels in their AFVs the majority of the time. The Federal fleet was successful in slightly decreasing petroleum consumption, but is not yet close to achieving the 20 percent reduction required by E.O. 13149.

DOE is aware that the quality of agency data is variable, particularly with respect to fuel consumption. DOE will continue to work with agencies to improve this data.

## **Appendices**

## Appendix A

EPA Compliance, FY 2004							
Agency	Covered Acquisitions <sup>1</sup> (#)	EPA Credits			AFVs as % of Covered Acquisitions (Including Credits)	Met Requirement <sup>3</sup>	Total AFV Inventory
		Number of AFVs	Total Credits <sup>2</sup>	Biodiesel Credits			
Agriculture	1,350	1,277	1,288	8	95	Yes	3,141
Commerce	327	144	152	0	46	No	375
Defense (Total)	8,549	8,005	10,207	2,027	119	Yes	30,444
Energy	1,065	880	1,057	165	99	Yes	3,549
Health and Human Services	197	112	119	5	60	No	684
Homeland Security	704	683	683	0	97	Yes	1,439
Housing and Urban Development	0	2	2	0	0	Yes	87
Interior	653	589	692	87	106	Yes	2,668
Justice	254	215	218	0	86	Yes	692
Labor	370	12	12	0	3	No	266
State	84	92	92	0	110	Yes	237
Transportation	753	217	219	0	29	No	1,150
Treasury	66	124	124	0	188	Yes	188
Veteran Affairs	1,093	243	261	10	24	No	1,332
Environmental Protection Agency	118	97	98	0	83	Yes	376
General Services Administration	1,235	974	990	0	80	Yes	719
National Aeronautics and Space Administration	167	269	330	52	198	Yes	883
Postal Service	1,434	874	1,126	235	79	Yes	36,852
Executive Office of the President	7	2	2	0	29	No	37
<b>TOTAL</b>	<b>18,426</b>	<b>14,811</b>	<b>17,675</b>	<b>2,592</b>	<b>96</b>	<b>Yes</b>	<b>85,119</b>

<sup>1</sup>Light-duty vehicles, excluding exempt vehicles. EPA allows exclusions based on geographic location; size of fleet; non-MSA/CMSA operation; and use in law enforcement, emergency, and military tactical vehicles.

<sup>2</sup>Includes 14,811 AFV acquisitions; 272 credits for dedicated light-, medium-, and heavy-duty AFVs; and 2,592 credits for biodiesel use, as allocated by E.O. 13149.

<sup>3</sup>EPA requires AFVs (and additional credits) to represent 75 percent of all covered light-duty vehicle acquisitions.

## Appendix B

E.O. 13149 Compliance, FY 2004										
Agency	Petroleum Consumption			Alternative Fuel Use			Fuel Economy			
	FY 1999 Covered Petroleum Consumption Baseline <sup>1</sup> (GGE)	FY 2004 Covered Petroleum Consumption <sup>1</sup> (GGE)	Consumption Reduction (%) <i>Increases shown as negative values</i>	FY 2004 Alternative Consumption <sup>2</sup> (GGE)	Alternative Fuel Use in AFVs (%)	On Track to Meet Requirement <sup>3</sup>	FY 1999 Fuel Economy Baseline <sup>4</sup> (mpg)	FY 2004 Fuel Economy <sup>4</sup> (mpg)	Increased Fuel Economy <sup>5</sup> (mpg)	On Track to Meet Requirement <sup>3</sup>
Agriculture	21,069,108	19,262,225	8.6	109,340	6.99	No	17	21	4	Yes
Commerce	1,132,791	1,720,780	-51.9	19,458	10.3	No	17	17.7	0.7	No
Defense (Total)	79,353,335	80,027,477	-0.8	1,791,073	9.28	No	18.6	21.6	3	Yes
Energy	6,979,418	6,857,174	1.8	476,630	21.07	No	17	19.1	2.1	Yes
Health and Human Services	2,247,820	2,023,037	10	157,469	34.02	No	19.2	22	2.8	Yes
Homeland Security	2,579,292	3,475,284	-34.7	145,566	12.24	No	N/A	19.5	N/A <sup>6</sup>	No
Housing and Urban Development	210,122	177,621	15.5	108	0.35	No	23	22.8	-0.2	No
Interior	21,221,692	20,829,849	1.8	268,906	64.34	Yes	16	23	7	Yes
Justice	842,256	573,434	31.9	111,082	21.68	No	19	20.7	1.7	No
Labor <sup>7</sup>	3,027,793	3,103,099	-2.5	50,694	N/A	No	21	N/A	N/A	No
State	293,729	290,076	1.2	25,620	20.65	No	15.7	18.7	3	Yes
Transportation	5,075,672	4,405,533	13.2	78,581	10.06	No	24	26.4	2.4	Yes
Treasury	870,705	695,269	20.1	28,132	16.3	No	18	18.3	0.3	No
Veteran Affairs	6,277,134	7,049,813	-12.3	21,337	1.48	No	18	20	2	Yes
Environmental Protection Agency	622,645	472,067	24.2	78,226	38.35	No	17	20.5	3.5	Yes
General Services Administration	677,681	362,984	46.4	30,661	12.98	No	18	22	4	Yes
National Aeronautics and Space Administration	1,521,959	1,288,405	15.3	91,939	27.59	No	18	20.6	2.6	Yes
Postal Service	125,547,125	125,281,292	0.2	938,727	5.35	No	18.5	20.8	2.3	Yes
Executive Office of the President	51,300	15,598	69.6	11,250	76.78	Yes	18	20	2	Yes
<b>TOTAL</b>	<b>279,601,577</b>	<b>277,911,017</b>	<b>0.6</b>	<b>4,434,797</b>						

<sup>1</sup> In E.O. 13149, covered vehicular petroleum fuel includes fuel used in on-road vehicles (light-, medium-, and heavy-duty), excluding law enforcement, emergency, and military tactical.

<sup>2</sup> Combination of all types of alternative fuels (CNG, LNG, LPG, E85, electric, and biodiesel).

<sup>3</sup> Tells whether the fleet is expected to meet the alternative fuel requirement (use alternative fuels in AFVs more than 50 percent of the time) and the fuel economy requirement (increase the fuel economy of non-AFV, new LDV acquisitions by 3 mpg) of E.O. 13149.

<sup>4</sup> Light-duty vehicle acquisitions excluding AFVs.

<sup>5</sup> Decreases in fuel economy are shown as negative numbers.

<sup>6</sup> Because the Department of Homeland Security did not exist in 1999, it does not have a FY 1999 average fuel economy. Therefore, the increase/decrease in average fuel economy could not be evaluated. FY 2004 data will be used as a baseline for this department in the future.

<sup>7</sup> The Department of Labor did not provide data for FY 2004.

## Appendix C

Alternative Fuel Consumption (GGE), FY 2004							
Agency	CNG	LPG	LNG	E85	ELE	Biodiesel (B100)	Total
Agriculture	4,543	2,664	0	97,651	0	4,481	109,339
Commerce	1,962	100	0	17,396	0	0	19,458
Defense (Total)	463,533	23,275	0	280,746	1,901	1,021,617	1,791,072
Energy	78,504	6,519	36,854	272,158	12	82,583	476,630
Health and Human Services	1,618	0	0	153,379	0	2,472	157,469
Homeland Security	3,327	296	0	141,940	3	0	145,566
Housing and Urban Development	0	51	0	57	0	0	108
Interior	89,033	49,516	54,086	32,537	13	43,721	268,906
Justice	62,869	444	0	47,517	0	252	111,082
Labor	24,900	0	0	25,794	0	0	50,694
State	22,159	0	0	3,461	0	0	25,620
Transportation	3,042	793	0	74,746	0	0	78,581
Treasury	161	0	0	27,971	0	0	28,132
Veteran Affairs	1,743	131	0	14,423	0	5,040	21,337
Environmental Protection Agency	11,640	176	0	66,410	0	0	78,226
General Services Administration	5,253	0	0	25,408	0	0	30,661
National Aeronautics and Space Administration	24,461	8,557	0	32,707	0	26,214	91,939
Postal Service	356,763	15,325	0	446,385	1,440	118,814	938,727
Executive Office of the President	700	0	0	10,550	0	0	11,250
<b>TOTAL</b>	<b>1,156,211</b>	<b>107,847</b>	<b>90,940</b>	<b>1,771,236</b>	<b>3,369</b>	<b>1,305,194</b>	<b>4,434,797</b>



## Appendix D

### List of Acronyms

Acronym	Phrase
AFV	Alternative Fuel Vehicle
B100	Biodiesel (100 percent, neat)
B20	Biodiesel (20 percent biodiesel, 80 percent petroleum diesel)
CNG	Compressed Natural Gas
DOE	U.S. Department of Energy
E85	Ethanol (85 percent ethanol, 15 percent petroleum)
ELE	Electric
E.O.	Executive Order
EPAct	Energy Policy Act of 1992
FFV	Flexible Fuel Vehicle
FR	Federal Register
FY	Fiscal Year
GGE	Gasoline Gallon Equivalent
LDV	Light-Duty Vehicle
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas (Propane)
M85	Methanol (85 percent methanol, 15 percent petroleum)
MPG	Miles Per Gallon
MSA/CMSA	Metropolitan Statistical Area/Consolidated Metropolitan Statistical Area